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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/686,495 | 10/14/2003 | Trent J. Brundage | P0895 | 3545 |

23735 7590 02/09/2007
DIGIMARC CORPORATION
9405 SW GEMINI DRIVE
BEAVERTON, OR 97008

EXAMINER

MORAN, RANDAL D

| | |
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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2135

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 02/09/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/686,495

Applicant(s)

BRUNDAGE ET AL.

Examiner

Randal D. Moran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 73-106 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 73-106 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's amendment filed on 1/10/2007 has been entered.
2. Claims 72-106 are pending in this application.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 73, 75-82, 84-91, 93-95, and 97-104** are rejected under 35 U.S.C. 102(b) as being anticipated by **Wang et al. (US 5,337,361)**, herein after "Wang."
7. Considering **Claim 73**, Wang discloses an identification document comprising: a substrate (Fig. 1A- item 16); a first graphic carried on or in the substrate (Fig. 1A- item 17), the first graphic representing a photographic image or artwork (Fig. 1- item 17); and electronic circuitry carried on or in the substrate (column 3- lines 58-61), wherein the electronic circuitry comprises information stored therein (column 4- lines 7-13), the first graphic comprising steganographically encoding

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- including a plural-bit first message that is machine-readable from optical scan data (column 9- lines 19-27) corresponding to at least a portion of said first graphic (column 3- lines 67-68, column 4- lines 1-3), wherein the first message comprises at least a code (column 8- lines 12-19), and wherein the code once obtained unlocks the electronic circuitry or the information stored therein (column 8- lines 38-41).
8. Considering **Claim 77**, Wang discloses an identification document comprising: a substrate (Fig. 1A- item 16); a photographic-representation of an authorized bearer of the identification document carried on or in the substrate (Fig. 1A- item 17, column 3- lines 55-57); machine-readable symbols carded on or in the substrate (column 2- lines 38-40 and 43-47); and electronic circuitry carried on or in the substrate (column 3- lines 58-61), wherein the electronic circuitry comprises information stored therein (column 4- lines 7-13), the machine-readable symbols representing data that is machine-readable from optical scan (column 9- lines 19-27) information corresponding to at least a portion of the machine-readable symbols (column 3- lines 58-64), and wherein the data once obtained unlocks the electronic circuitry or the information stored therein (column 8- lines 38-41).
9. Considering **Claim 86**, Wang discloses an identification document comprising: a substrate (Fig. 1A- item 16); a photographic-representation of an authorized bearer of the identification document carried on or in the substrate (Fig. 1A- item

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17, column 3- lines 55-57); information carried on or in the substrate (column 4- lines 6-12); and electronic circuitry carried on or in the substrate (column 3- lines 58-61), wherein the electronic circuitry comprises data stored therein (column 4- lines 7-13), wherein the information carried on or in the substrate is recognizable from optical scan data (column 9- lines 19-27) corresponding to at least a portion of the information carried on or in the substrate (column 3- lines 58-64), and wherein at least a portion of the information once recognized unlocks the electronic circuitry or the data stored therein (column 8- lines 38-41).

10. Considering **Claim 94**, Wang discloses an identification document comprising: a substrate (Fig. 1A- item 16); a photographic-representation of an authorized bearer of the identification document carried on or in the substrate (Fig. 1A- item 17, column 3- lines 55-57); information carried on or in the substrate (column 4- lines 6-12); and electronic circuitry carried on or in the substrate (column 3- lines 58-61), wherein the electronic circuitry comprises data stored therein (column 4- lines 7-13), wherein the information carried on or in the substrate is obtainable from optical scan data (column 9- lines 19-27) corresponding to at least a portion of the information carried on or in the substrate (column 3- lines 58-64), and wherein at least a portion of the information is provided for cooperation with the electronic circuitry or the data stored therein (column 4- lines 6-12), wherein the cooperation is to unlock the electronic circuitry or the data stored therein (column 8- lines 38-41).

11. Considering **Claim 101**, Wang discloses an identification document comprising: a substrate (Fig. 1A- item 16); a photographic-representation of an authorized bearer of the identification document carried on or in the substrate (Fig. 1A- item 17, column 3- lines 55-57); information carried on or in the substrate (column 4- lines 6-12); and electronic circuitry carded on or in the substrate (column 3- lines 58-61), wherein the electronic circuitry comprises data stored therein (column 4- lines 7-13), wherein the information carried on or in the substrate is obtainable from optical scan data (column 9- lines 19-27) corresponding to at least a portion of the information carried on or in the substrate (column 3- lines 58-64), and wherein at least a portion of the information once obtained is to be utilized to unlock the electronic circuitry or the data stored therein (column 8- lines 38-41).

12. Considering **Claim 104**, Wand discloses an identification document comprising: a substrate (Fig. 1A- item 16); a photographic representation of an authorized bearer of the identification document carried on or in the substrate (Fig. 1A- item 17, column 3- lines 55-57); information carried on or in the substrate (column 4- lines 6-12, col. 3, lines 59); and electronic circuitry carded on or in the substrate (column 3- lines 58-61), wherein the electronic circuitry comprises data stored therein (column 4- lines 6-12), wherein the information carried on or in the substrate is obtainable from optical scan data (column 9- lines 19-27) corresponding to at least a portion of the information carried on or in the substrate (column 3- lines 58-64), wherein at least a portion of the information once obtained allows access to the electronic circuitry or the data stored therein (col. 8,

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- lines 38-41, information is encoded into the barcode and once the card is read it allows you access to a human readable form of that information, (i.e. col. 4- lines 6-12).
12. Considering **Claims 75, 78, 82, 87, 91, 97, and 103**, Wang discloses the identification document comprises at least one of a driver's license, passport, and photo-identification card (column 3- lines 52-55).
13. Considering **Claims 76, 84, and 93**, Wang discloses the information carried on or in the substrate is utilized as at least one of an encryption key or a decryption key (column 10- lines 8-10 and 14-17).
14. Considering **Claims 79, 88, 98, and 102**, Wang discloses the substrate comprises multiple components (column 3- lines 52-55, column 3- lines 58-61).
15. Considering **Claims 80, 89, and 99**, Wang discloses the identification document comprises at least one of a driver's license, passport, and photo-identification card (column 3- lines 52-55).
16. Considering **Claim 81, 90 and 100**, Wang discloses the machine-readable symbols are steganographically encoded in the photographic-representation of the authorized user (column 3- lines 67-68, column 4- lines 1-3).

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17. Considering **Claim 85**, Wang discloses the symbols represent human readable information (column 4- lines 38-42).
18. Considering **Claim 95**, Wang discloses at least a portion of the information - once processed - is for cooperation with the electronic circuitry or the data stored therein (column 3- lines 58-61, column 8- lines 38-41).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. **Claims 74, 83, and 92** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wang** in view of **Priddy (US 5,984,366)**.

21. Considering **Claims 74, 83, and 92**, Wang does not disclose the substrate comprises multiple layers.

Priddy does disclose the substrate comprises multiple layers (column 4- lines 15-24).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang by the multi-layered

identification document as taught by Priddy for the benefit of being able to optically detect the code, notwithstanding that the code is hidden by another layer (Priddy- column 4, lines 21-22).

22. **Claim 96** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Wang** in view of **Kristol et al. (US 5,799,092)**, herein after "Kristol."

23. Considering **Claim 96**, Wang does not disclose at least a portion of the information is to be processed to yield a hash, the hash being for cooperation with the electronic circuitry or the data stored therein.

Kristol does disclose at least a portion of the information is to be processed to yield a hash, the hash being for cooperation with the electronic circuitry or the data stored therein (column 4- lines 57-64).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang using the hash function in cooperation with the data stored in the electronic circuitry as taught by Kristol for the benefit of encoding the image signature (Kristol- abstract, lines 10-12) using a well-known hash function (Kristol- column 4- lines 60-61).

22. **Claim 105** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Wang** in view of **Leighton (US 5,664,018)**, herein after "Leighton."

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24. Considering **Claim 105**, Wang does not disclose the information is carried on or in the substrate with digital watermarking.

Leighton does disclose the information is carried on or in the substrate with digital watermarking (column 4, lines 38-41).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang using digital watermarking as taught by Leighton for the benefit of protecting the image and preventing unlawful copying of digitized media (col. 1, lines 5-7, col. 3, lines 6-8).

22. **Claim 106** is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of **Behram et al. (US 5,499,293)**, herein after "Behram."

25. Considering **Claim 106**, Wang does not disclose the information is obtained from the optical scan data through optical character recognition.

Behram does disclose the information is obtained from the optical scan data through optical character recognition (col. 38-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wang by obtaining information through optical character recognition as taught by Behram for the benefit of using an inexpensive "ink on paper" approach to create the cards.

Response to Arguments

24. Applicant's arguments filed 1/10/2007 have been fully considered but they are not persuasive.

25. Applicant argues that the rejection applied to **Claims 73, 77, 86, 94, 101, and 104** is deficient because it lacks the limitations "electronic circuitry carried on or in the substrate." The examiner disagrees. According to the applicant per amendment filed on 1/10/2007, p. 3, line 1 of ¶ 4, "electronic circuitry implies physical circuits, structure, or components." Wang discloses a barcode (col. 3, lines 58-61, Overlaid on top of image 17 is a two-dimensional pattern 18 containing encoded information. Preferably the information in pattern 18 is encoded in the PDF417 two-dimensional bar code), which does include structure, and components that are encoded onto the substrate to be read by the card reader. The barcode contains information encoded therein (col. 3, lines 59, containing encoded information).

Applicant argues that Wang does not disclose "steganographically encoding."

Steganographically encoded is defined as writing hidden messages, which have been transformed from one format into another, in such a way that no one apart from the intended recipient knows of the existence of the message. Therefore, the examiner disagrees with the applicant's remarks and still maintains that Wang teaches the barcode pattern is encoded onto the image in such a way that it is hidden from the user (col. 3, lines 67-68, col. 4, lines 1-3, Alternatively, the pattern may be encoded in an ink that is ultra sensitive light and virtually transparent to visible light. In either case, pattern should

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be placed over graphic image 17 in a manner that would not obscure or distort that image.) Therefore, the image and the barcode together form the machine-readable message where the barcode is encoded into the image. The barcode is encoded in such a way that it is hidden from view and is virtually transparent.

Applicant argues that Wang does not disclose the “code once obtained unlocks the electronic circuitry or information stored therein.” Examiner disagrees with the applicant’s remark and still maintains that Wang teaches the code, (i.e. the barcode), (col. 8, lines 12-19, Data to be encoded into the two-dimensional pattern 18 on record 16 is entered into the encoding means 12 by entering means 22. The data entered by entering means 22 may include both data to be encoded into the two-dimensional pattern 18 and the data to appear on record 16 in human readable form.) once obtained, (i.e. read by the card reader), unlocks, (i.e. decodes), the electronic circuitry or the information stored therein (i.e. information that the owner is ineligible to drive without corrective lenses) (col. 4, lines 3-12, col. 8, lines 36-41, Recognition means 14 includes converting means 28 that converts the image on record 16 into electrical signals representative of the graphic indicia. Decoding means 30 decodes the electrical signals into, decoder output signals that are representative of the data encoded into the pattern 18.) Therefore, decoding the signals is taught by Wang in that it does unlock the information stored on the card into output signals, which represent the data encoded into the barcode.

Applicant is reminded that additional modification to clarify the claimed language is necessary for further consideration and distinction from the prior art.

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25. Applicant argues that the rejection applied to **Claims 81, 90, and 100** is deficient because it lacks the limitations “information steganographically encoded in a photographic representation of an authorized bearer of an identification document.”

Steganographically encoded is defined as writing hidden messages, which have been transformed from one format into another, in such a way that no one apart from the intended recipient knows of the existence of the message. Therefore, the examiner disagrees with the applicant’s remarks and still maintains that Wang teaches the barcode pattern is encoded onto the image in such a way that it is hidden from the user (col. 3, lines 67-68, col. 4, lines 1-3, Alternatively, the pattern may be encoded in an ink that is ultra sensitive light and virtually transparent to visible light. In either case, pattern should be placed over graphic image 17 in a manner that would not obscure or distort that image.) The symbols or information (i.e. the electrical signals converted from the image/barcode) are encoded into the photographic representation of the authorized user (i.e. virtually transparent to visible light). Therefore, the image and the barcode together form the machine-readable message where the barcode is encoded into the image. The barcode is encoded in such a way that it is hidden from view and is virtually transparent.

26. Applicant argues that the rejection applied to **Claims 95** is deficient because it lacks “that at least a portion of the information- once processed – is for cooperation with the electronic circuitry or the data stored therein.” The examiner disagrees with the applicant’s remarks and still maintains that Wang teaches after the barcode containing information, that after being read, cooperates and allows access to the data stored on the card (col. 4 lines 6-12, the information could relate to the holder of the item, col. 4, lines

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28-30, Alternatively, the data could be a type of "faceprint" in which certain relationships in the face are encoded to identify the owner uniquely.) Therefore the barcode/image contains information, which once read (i.e. processed) and decoded (i.e. for cooperation with) into data that representative of data encoded into the pattern (i.e. the data stored therein).

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US 6,389,151- Self-validating security documents.
- US 5,760,386- Improvement to ID documents.

25. Accordingly, **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

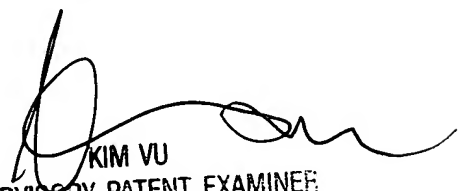
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25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randal D. Moran whose telephone number is 571-270-1255. The examiner can normally be reached on M-F: 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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